CLAIMS

1. Adaptive routing process of objects in a network containing a plurality of routers (1) linked between themselves by links (2). Each router includes:

- M incoming links (2a) and M outgoing links (3)
- An external queue (4)
- An M size routing buffer (5) and
- A processing module (6)

Each router is linked with a routing table including values relating to the estimation of the number of deflections undergone by each object at the start of this router for a given destination.
The said process containing a first initialisation stage (E1) for the value tables linked with each router then a recurrent processing stage of each network link consisting of:

a) detecting if at least one object has arrived on at least one router (E2)

b) considering each network link and seeing if there is at least one object on these links (E3)

- if yes move the objects along the links of a unit of time
- if not wait for a unit of time

c) consider each network router and for each detect the state of these incoming links (E4)

- if the presence of an object is detected on an entering link and the destination of this object is the router considered then the said object having arrived at the destination it is removed from the network
- if any object with a destination of this router is not detected on the incoming links then check the state of the internal queue
- if the internal queue contain objects then transfer these objects in the routing buffer of the router (E4b1)
- if the said buffer is not full then verify if objects are on standby in the external queue (E4b4) and fill the buffer with a part at least of the objects on standby in this external queue (E4b3) characterised by the fact that it consists of

d) allocating the content of the routing buffer on the outgoing links of the router according to the linked routing table and dynamically estimate the number of deflections which the objects will undergo on forward points of the router to reach their destination (E4c)

e) updating the linked routing table values to estimate the number of deflections undergone on the whole path by the objects (E4d5, E4d4)

2. Process according to claim 1 characterised by the fact that at the arrival of the object each router sends to the preceding router an acknowledgement of

receipt indicating the estimated number of deflections undergone by the object to go up to the destination router.

3. Process according to claim 1 or 2 characterised by the fact that stages c) to e) are carried out successively for each router.

4. Process according to claim 1 or 2 characterised by the fact that stages c) to e) are carried out simultaneously for each router.

5. Process according to which any of claims 1 to 4 characterised by the fact that stage c) consists of taking into account the information contained in the acknowledgement of receipt sent by all the neighbouring routers to update the routing tables